(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
8 April 2004 (08.04.2004)

PCT

(10) International Publication Number
WO 2004/029101 A1

(51) International Patent Classification[7]: C08F 4/64, 4/70, 10/00

(21) International Application Number:
PCT/EP2003/010712

(22) International Filing Date:
24 September 2003 (24.09.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
02079063.0 27 September 2002 (27.09.2002) EP

(71) Applicant *(for all designated States except US)*: ATOFINA RESEARCH [BE/BE]; Société Anonyme, Zone Indstrielle C, B-7181 Seneffe (Feluy) (BE).

(72) Inventor; and
(75) Inventor/Applicant *(for US only)*: RAZAVI, Abbas [IR/BE]; Domaine de la Brisée 35, B-7000 Mons (BE).

(74) Common Representative: ATOFINA RESEARCH; Patent Department, Zone Indstrielle C, B-7181 Seneffe (Feluy) (BE).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2004/029101 A1

(54) Title: DUAL SITE CATALYST SYSTEM COMPRISING A HAFNOCENE COMPONENT FOR THE PRODUCTION OF BIMODAL POLYOLEFINS IN A SINGLE REACTOR

(57) Abstract: The present invention discloses a metallocene catalyst system for producing polyolefins comprising: A. a hafnocene-based catalyst component suitable for producing the high molecular weight fraction of the polyolefin; B. one or more metallocene or post-metallocene components different from the component A and suitable for producing the low molecular weight fraction of the polyolefin; C. an actvating agent having a low or no co-ordinating capability.